CLAIMS

What is claimed is:

1. A method for controlling wireless network traffic, comprising:

determining when a roaming mobile station initiates a registration attempt with a non-preferred network; and

causing the roaming mobile station to initiate a registration attempt with a preferred network.

2. The method of claim 1, further comprising determining what network the mobile station is currently registered with.

3. The method of claim 1, further comprising preventing the mobile station from succeeding in the registration attempt with the non-preferred network.

4. The method of claim 1, wherein the registration attempt with the non-preferred network is completed, the method further comprising:

determining that the mobile station is registered with a non-preferred network; and

periodically causing the mobile station to reinitiate a registration attempt with a preferred network.

5. The method of claim 1, further comprising:

determining whether the mobile station should be moved to another network; and

updating files on the mobile station, including a preferred provider list.

6. The method of claim 1, further comprising:

determining whether the registration attempt with a non-preferred network is allowed to succeed;

if the registration attempt is not allowed to succeed, rejecting the attempt.

7. The method of claim 6, wherein rejecting the attempt comprises sending a recognized transaction to the mobile station that aborts the attempt.

8. The method of claim 6, wherein rejecting the attempt comprises causing a transaction time out.

9. The method of claim 6, wherein rejecting the attempt comprises modifying a message to restrict roaming by the mobile station.

10. The method of claim 1, further comprising determining whether a roaming mobile station is engaged in a voice or data session.

11. The method of claim 1, further comprising determining whether a roaming mobile station is in an automatic network selection mode or a manual network selection mode.

12. The method of claim 1, further comprising invoking an Update Location message on demand.

13. A method for directing a network entity to a particular network, comprising:

detecting a roaming network entity is registering with a visited network;

detecting the visited network is a non-preferred network; and

initiating a redirection message to the network entity that causes the network entity to search for a preferred network.

14. The method of claim 13, wherein detecting the roaming network entity is registering with a visited network includes tapping a message and determining at least a mobile country code (MCC) and a mobile network code (MNC).

15. The method of claim 14, wherein the message is an Update Location message.

16. The method of claim 13, further comprising:

sending the redirection message to an over-the-air (OTA) server;

encrypting the message; and

forwarding the message to a short message service center (SMSC).

17. The method of claim 13, further comprising:

determining whether the network entity includes a Subscriber Identity Module (SIM) toolkit application (STK); and

if the network entity includes an STK, initiating redirection with the STK.

18. The method of claim 13, further comprising:

if the network entity includes an STK, determining whether a Public Land Mobile Network (PLMN) list is on the SIM; and

if not, forwarding a PLMN list to the SIM.

19. The method of claim 13, further comprising:

in response to the message, initiating redirection procedures; and

updating information on the SIM, including

a home PLMN search time period;

a PLMN selector file; and

a location information file.

20. The method of claim 13, further comprising, in response to the message, issuing a RUN AT+COPS command to select a specific network.

21. A system for directing wireless network traffic, comprising:

a network operator backend, including an OTA interface; and

a traffic redirection network entity, wherein the traffic redirection entity communicates with a mobile station to direct registration with a particular network when the mobile station attempts registration with a non-preferred network.

22. The system of claim 21, wherein the traffic redirection network entity comprises a traffic redirection node, a traffic redirection roaming probe, and a traffic redirection application.

23. The system of claim 22, wherein, in a passive mode, the traffic redirection network entity monitors a signaling link between a home network and an SS7 signaling network to determine a network the mobile station is currently registered with.

24. The system of claim 22, wherein, in an active mode, the traffic redirection node is in a signaling path 314 between a visited location register in a visited network and a home location register in a home network that determines a network the mobile station is currently registered with.

25. The system of claim 22, wherein, in an active mode, the traffic redirection node is in a signaling path 314 between a visited location register in a visited network and a home location register in a home network.